

REQUEST FOR RECONSIDERATION

Claims 1-21 remain active in this application.

The claimed invention is directed to a hair cleansing composition.

Hair cleansing, such as shampooing, tends to damage the appearance of hair.

Protecting bases added to shampoo compositions can sometimes be difficult to formulate such that the protecting base can be ineffectively delivered to the hair. Accordingly, hair cleansing compositions which are effective at delivering a protecting base to hair are sought.

The claimed invention addresses the problem by providing a hair cleansing composition comprising an amphipathic amide lipid, an anionic surfactant and an acid where the composition has a pH of from 1 to 4.5 at 25°C when diluted with water to 20 times the weight of said composition. Applicants have discovered that a pH of from 1-4.5 is effective for delivery of the amphipathic amide lipid to provide hair penetration and prevent irritation. Such a hair cleansing composition is nowhere disclosed or suggested in the cited prior art of record.

The rejections of claims 1-20 under 35 U.S.C. § 103(a) over Hoshino et al. (U.S. 6,685,953) in combination with Uchiyama et al. (U.S. 5,876,705) and of claim 21 in further view of U.S. 5,393,519 are respectfully traversed.

None of the cited references discloses or suggests a hair cleansing composition at a pH of from 1-4.5 as claimed.

Hoshino et al. alone and in combination with Uchiyama et al. fails to disclose or suggest a hair cleansing composition at a pH of from 1-4.5 as claimed.

While there is no express disclosure of the claimed pH range, the examiner cites to the disclosure of Hoshino et al. at column 7 of a pH regulator which could be used in a shampoo composition containing an amphipathic amide lipid as claimed. Such a disclosure fails to remedy the defect of the reference failing to disclose or suggest the specific pH of from 1-4.5

as claimed. Moreover, there is **no specific pH regulator** disclosed in the passages of this reference cited by the examiner. As such the reference can not suggest the claimed pH range of from 1 to 4.5 as claimed.

Claim Limitation Of pH of 1 to 4.5 Is Not Disclosed

Page 5 of the official action asserts that the claimed pH would have been arrived at by adjusting the concentration of citric acid.

Applicants respectfully submit that the mere disclosure of citric acid does not suggest the specific pH of 1-4.5 as claimed.

A pH regulator is merely used to adjust the pH of a composition. Acidic pH regulators lower the pH, while basic pH regulators increase the pH. Accordingly an acidic pH regulator would reduce the pH of a composition, the ultimate pH merely being less basic than the starting pH. The ultimate pH could be acidic or basic. Conversely, a basic pH regulator would increase the pH of a composition, the ultimate pH merely being less acidic than the starting pH. The ultimate pH could be acidic or basic. There is no suggestion that the ultimate pH of the composition be either acidic or basic based on the mere disclosure of pH regulators. Thus, in the absence of any guidance as to the ultimate pH, the disclosure of the use of a pH regulator is not suggestive of the claimed pH range of 1 to 4.5.

The secondary reference of Uchiyama et al. fails to cure the basic deficiencies of the primary reference.

This reference fails to disclose or suggest a pH of 1-4.5 and as such cannot render the claimed invention obvious in combination with Hoshino et al.

The examiner cites to the paragraph bridging columns 22-23 which cites the use of pH adjusting agents such as citric acid, succinic acid, phosphoric acid, sodium hydroxide and

sodium carbonate. Such a laundry list of pH adjusting agents of **an acidic and a basic nature** makes clear the failure of the reference to suggest an acidic pH of **from 1-4.5**.

Use Of Citric Acid In A Composition Does Not Ensure A pH As Claimed

The implication from page 5 of the official action is that use of citric acid in a composition would inherently provide for a pH within the claimed range of 1 to 4.5.

Applicants have conducted additional experiments and demonstrated a variance in pH depending on the content of citric acid, the pH exceeding the claimed range of 1 to 4.5 in Comparative Example 4. For the examiner's convenience the additional data is reproduced below:

Applicants have conducted additional experiments, similar to example 3 of Hoshino in which only a trace (0.05 wt. %) of citric acid is used. For the examiner's convenience the data is reproduced below:

Table 2

							(wt.%)			
		Examples					Comparative Examples			
		1	2	3	4	5	1	2	3	4
(A)	Amphipathic amide lipid A	2	2	-	2	2	2	-	-	2
	Amphipathic amide lipid B	-	-	2	-	-	-	-	-	-
(B)	Sodium polyoxyethylene (2) lauryl ether sulfate	10	10	10	10	10	10	10	10	10
	Sodium lauryl sulfate	5	5	5	5	5	5	5	5	5
(C)	Lactic acid	1	-	1	-	-	1	1	-	-
	Malic acid	-	1	-	-	-	-	-	-	-
	Citric acid	-	-	-	0.15	1.2	-	-	-	0.05
Others	Myristyl alcohol	1	1	1	1	1	1	1	1	1
	Cocoylmonoethanolamide	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Ethylene glycol distearate	1	1	1	1	1	1	1	1	1
	Cationized hydroxyethyl cellulose	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	Cationized guar gum	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	pH regulator (sodium hydroxide, citric acid)	q.s.*	q.s.*	q.s.*	-	-	q.s.*	q.s.*	q.s.*	-
	Purified water	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance
pH		3.5	3.5	3.5	4.5	3.0	5	3.5	6.0	6.0
Evaluation	Smoothness of hair	A	A	A	B	B	C	C	C	C
	Moist feeling of hair	A	A	A	B	B	C	C	C	C
	Physical property-recovering ratio of hair	A	A	B	B	B	C	C	C	C

* An amount to adjust the pH

Examples 4, 5 and comparative example 4 are prepared from the same components, in the same amount, but for the content of citric acid. Examples 4 and 5 were demonstrated to have a pH within the claimed range of 1 to 4.5, while comparative example 4, containing citric acid, but had a pH on 6, outside the claimed range. Thus, the evidence is clear, that the mere use of citric acid in a composition does not ensure a pH within 1 to 4.5 and accordingly, the claimed pH range is not obvious from the mere inclusion of citric acid in a formulation.

Applicants note the examiner's citation to example 3 of Hoshino et al in which a composition containing a "trace" amount of citric acid is reported. While a trace amount is not quantified by Hoshino et al, applicants' evidence in comparative example 4 using only 0.05 wt. % of citric acid, arguably a trace amount, demonstrates that such a small amount is not enough to ensure a pH within the claimed range of 1 to 4.5. Thus, the **evidence** of record

rebutts the examiner's assertion that the mere use of citric acid would cause those of ordinary skill in the art to arrive at the claimed pH range.

The official action relies on Dowell et al. U.S. 5,393,519 for the disclosure of a pH of from about 3 to about 8 for a shampoo composition (c 17, ll 5).

Applicants note that this reference does not provide motivation to formulate any shampoo at a pH of from about 3 to about 8 as the pH is such that a sufficient amount of acid is present such that essentially no solid particles of the amine are present (c 17, ll 1-4). A **preferred pH range** is from about 5 to about 7 (c 17, ll 5-6). The reference describes a suspending agent comprising an amine and a suitable acid (c 14, l 29-32). The amine is present in a sufficient amount such that essentially no solid particles of the amine are present in the composition (c 14, l 36-39). In order to provide the disclosed suspending agent, a sufficient amount of acid is included **to neutralize the amine** such that essentially no solid particles of the amine are present (c 16, ll 27-34). Thus, the reference makes clear that the pH of the composition is provided to ensure a complete neutralization of an amine which, when neutralized with an acid, provides for the disclosed suspending agent. As the pH is tied to the neutralization of a specific amine component, the reference does not provide any motivation to formulate shampoo compositions to a pH of about 3 to about 8, but rather only those compositions which comprise the amine component which is converted to suspending agent. As such an amine component is not disclosed in either of the two references, the combination of references do not disclose or suggest the claimed pH range of 1 to 4.5.

Applicants Observe Improved Performance Within The Claimed pH Range Of 1 to 4.5

Applicants, refer again to the data discussed above, and note a demonstrable improvement in hair care performance in terms of hair smoothness, moist feeling and physical property-recovering ratio for the claimed composition having a pH of from 1 to 4.5

in conjunction with an amphipathic amide lipid. Comparative examples 1 and 4 each containing amphipathic amide lipid A but a pHs outside the claimed range of 1 to 4.5, each demonstrated reduced performance in terms of hair smoothness, moist feeling and physical property -recovering ratio.

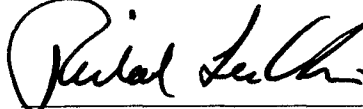
In contrast, examples 1-5, all having an amphipathic amide lipid and an acid with a pH within the claimed range, out performed the comparative examples across the board in the evaluation panel. Thus, by selection of pH for an amphipathic amide lipid containing composition, applicants are able to provide for more effective hair care performance, a result which is not suggested by Hoshino et al.

As the combined teachings of the references fails to disclose or suggest a pH of from 1-4.5, nor an improved hair care performance there from, the claimed invention is clearly not rendered obvious and accordingly withdrawal of the rejections under 35 U.S.C. § 103(a) is respectfully requested.

Applicants submit that this application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

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